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ABSTRACT

Schools tend to have a built-in bias toward left brain activities (tasks that are linear and sequential in nature), so the introduction of right brain activities (functions related to music, rhythm, images, color, imagination, daydreaming, dimensions) brings a balance into the classroom and helps those students who may be right brain oriented. To study Orwell's "1984" in an advanced reading class, activities were developed that used clustering (a technique that involves brainstorming and free associating and that fosters right brain activities) as a basis for information processing. Clusters were used to review the characters--first male and then female--and the story, and all information was written on the blackboard simultaneously so that the students could see the relationships between the characters and the society. The symbolic meaning of the characters, their behavior and their significance was explored in group discussions. By understanding the characters, the students were thinking creatively, seeing relationships and understanding the complexities of the book. Clustering, a right brain activity, helps students process information in a more balanced way, by aiding in perceiving, in understanding, in analyzing and drawing conclusions. (Several illustrations of group clusters are appended.) (NKA)

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Right Brain Activities to Improve Analytical Thinking

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New information about the brain has forced educators to take a new look at the way students process information. This research information deals with basic information about the left and right hemisphere of the brain. For the purposes of this discussion, we can say that the left hemisphere is "good" at processing information by inductive reasoning: it deals with precise oral and written communication. Thus, the left hemisphere does well at processing information requiring tasks which are linear and sequential in nature. On the other hand, activities related to music, rhythm, images, color imagination, daydreaming, dimensions and similar activities are attributed to the right hemisphere. It deals with whole concepts; from whole to parts; combining parts into holistic concepts and deals better with non-verbal communication such as graphs, charts, creative and indirect information (James Platt, 1982). Gabrielle Lusser Rico a researcher in this field states:

> "What characterizes left brain responses is that they are highly literal; they can be looked up in the dictionary; they are logical and explanatory; they do not go beyond what is given; they are precise." (p. 83)

And in reference to right brain responses Rico (1976) states:

> "What characterizes right brain responses is that they tend to be metaphoric (soup becomes a child) reflecting a complex image or a series of connected images in words; they are personal; they tend to be full-circle wholes, they go beyond

the given and the literal." (p. 84)

However, the right and left hemisphere of the brain should not be treated as separate "parts." That is, when we process information, both the left and right hemisphere of the brain are used so that our perceptions and our conclusions are clearer (Barzan, 1984). For example, people who are "whole-brain" dominant, i.e. using the right and left hemisphere when integrating information inductively and deductively. Thus, getting a better more complete analysis of a situation and arrive at more integrated conclusions. That is, it will depend upon the problem to be solved as to which approach should be used.

On practical application of this new research, are instruments which have been developed to identify learning styles of students. Some instruments are designed to identify whether a student is predominantly left brain oriented or right brain oriented. In addition, these instruments also determine the person's learning style, i.e. the preferred way to process information.

Studies conducted using these learning styles instruments have particular significance for students in remedial reading courses. For example, Ned Hermann (1982) an expert in creative brain research, developed an instrument to determine if a person is right brain dominant or left brain dominant. He conducted

an investigation to identify the orientation of two groups of high school students: Group I were students in a remedial program and Group II were students in an accelerated program. The Herrmann Brain Dominance Scale was administered to all these students and there was a clear difference between the two groups. The remedial students were for the most part right brain oriented. Their profile was as follows: 64% were right brain dominant; and only 18% were left brain dominant and 18% were double-dominant. Whereas, the accelerated students were mainly left brain or double dominant: 53% were left brain dominant; 37% were double-dominant but only 10% were right brain oriented. The accelerated students were processing information using both right brain and left brain activities far more than the remedial students. The important point here is that this study suggests that solving problems demand that we use both sides of the brain. Whether you need to use a linear or non-linear approach to solve a problem will depend upon the nature of the problem.

Thus, we should strive for a balance in the kinds of strategies and techniques we use in the classroom to instruct students and in the kinds of activities we require of the students. Both left and right brain responses should be expected. Students should be given an opportunity to develop and strengthen both ways of processing information.

Since schools tend to have a built in bias toward left brain activities, I have tried to introduce "right brain" activities to bring a balance into the classroom and to help those students who may be right brain oriented. In the remainder of this paper, I discuss activities I have used with students to help them improve their interpretive skills in comprehension.

"Right Brain Activities"

One of the techniques which has been developed to help foster right brain activities is clustering. Clustering was developed by Gabriele Lusser Rico (1976) for writers. It involves brainstorming to generate information about a topic and free associating. The writer starts with a nucleus word and this acts as a stimulus to generate thoughts and ideas. These ideas are recorded around the nucleus word.

In my advanced reading class, the theme for the semester was obedience to authority. One of the required readings was George Orwell's 1984. The book is divided into three parts and the students are given essay exams at the end of each section. When the students completed Part I, this section was reviewed to make sure they understood: (1) the characters as they had been developed, (2) the relationships between the characters, (3) the symbolic meaning of the characters in relation to the society of 1984. In addition, this review also helped students to anticipate events. All of these objectives demanded that the students see relationships and use inferential reasoning skills. Clustering was one method used for reviewing Part I.

We began with a review of the male characters in 1984. The central character's name was placed on the board and the students were asked to volunteer any information about the character in a word or phrase that described the character. The cluster was placed on the board and the students were asked to place the cluster in their notebook as I wrote it on the board. As the students volunteered words or phrases, they were also asked to cite examples to support the description. This encouraged students to give supporting evidence for their responses. The information elicited is at random, i.e. it does not matter in what order the students give their information. An excellent profile of the character emerged. Illustration I, shows how this process developed. We can see from this illustration how students were getting a clear picture of the character and the setting of the story as well. In Illustration II, the character had only been briefly introduced in Part I of the book. But, he is a central character in helping to understand the society. Illustrations III and IV indicate further how students were drawing inferences, making connections and getting a good "picture" of what happened in Part I.

All of this information appeared on the blackboard simultaneously. I wanted the students to be able to see relationships - between the characters and the society. The students were able to see at a glance that with the exception of one character, (Parsons), all the

men in the book, thus far, were portrayed as intelligent. A fact, by the way, that never came out in our general class discussions of the story. A lively discussion followed. The symbolic meaning of the characters, their behavior and their significance in relation to the society of 1984 was explored. By understanding the characters, the students were thinking creatively, seeing relationships and understanding the complexities of the book.

The next assignment was to make clusters on the female characters. One class had this for a home assignment and another class did it during a class session. Illustration V is a sample of a student's cluster which was done as a home assignment. What was immediately apparent, was the identity of the women in 1984 was directly tied to their interaction with the men. Only one of the women had a last name. And, with the exception of one female character, all the women were not considered very intelligent. The students were able to get into a more complex analysis of the interaction of the men and women and the students were able to see very quickly how George Orwell tied sexuality and politics together. This review, which turned out to be an in depth analysis, helped students to clarify their thinking and they really began to understand the society of 1984. It was not unusual for students to say during the course of the discussion "oh, is that what that meant."

This process turned out to be an excellent way for the students to review the story. It was also a way to help them prepare for

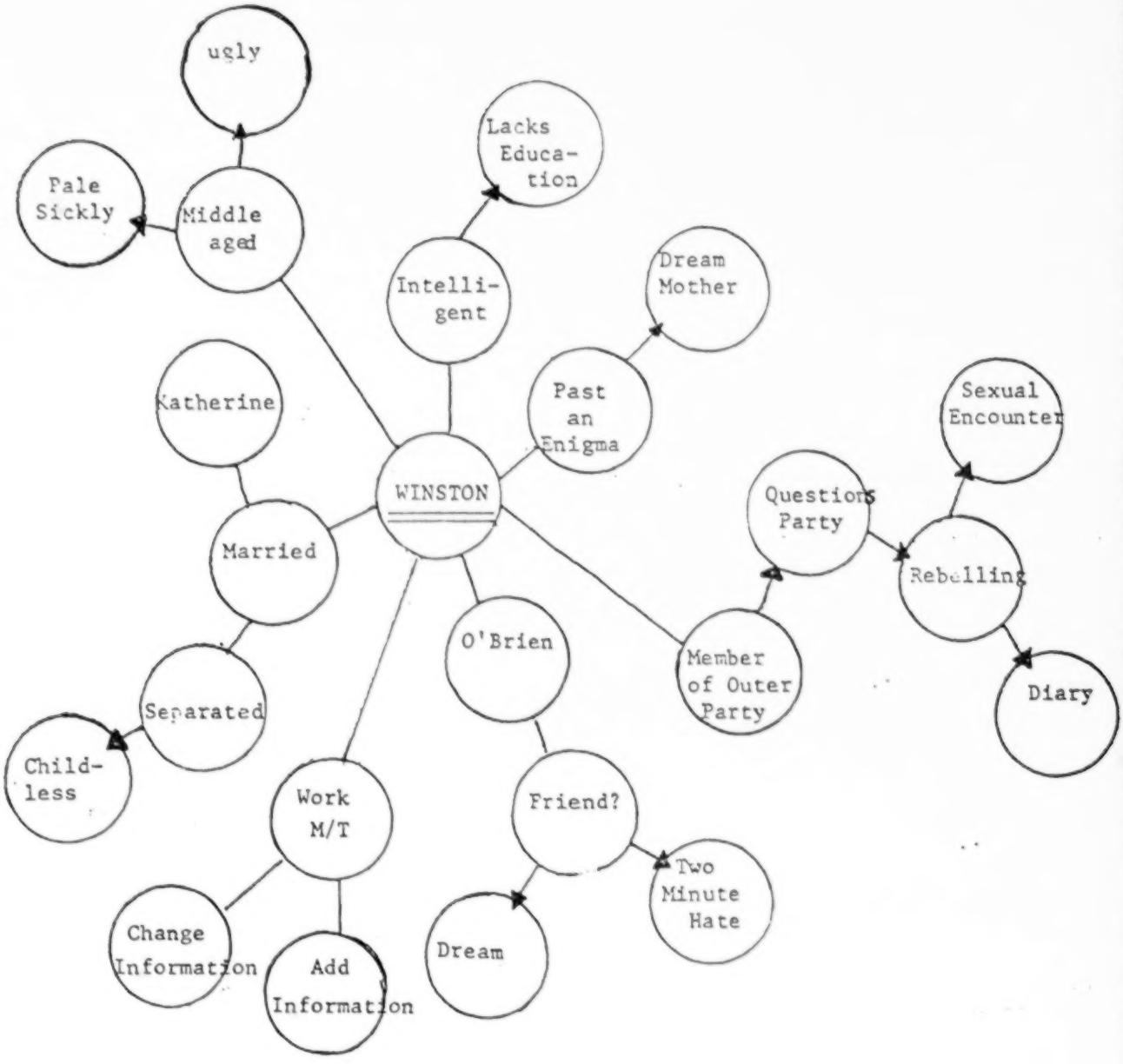
the written essay exam as well.

With the new findings coming from brain research and being translated for education, e.g. learning styles instruments, to help students process information in a more balanced way, we may be on the threshold of a completely new direction in education in the area of learning. We can use this new information to help students use both sides of the brain for a more balanced approach in perceiving, understanding, in analyzing and drawing conclusions. To increase the ability to see relationships, to think in analytical terms and to express themselves more precisely in writing are all areas which will be affected in the future. Clustering, a right brain activity, seems to be a technique which will help bring about this balance.

CLASS SESSION - GROUP CLUSTER

ILLUSTRATION I

Character sketch on Winston Smith - George Orwell's 1984



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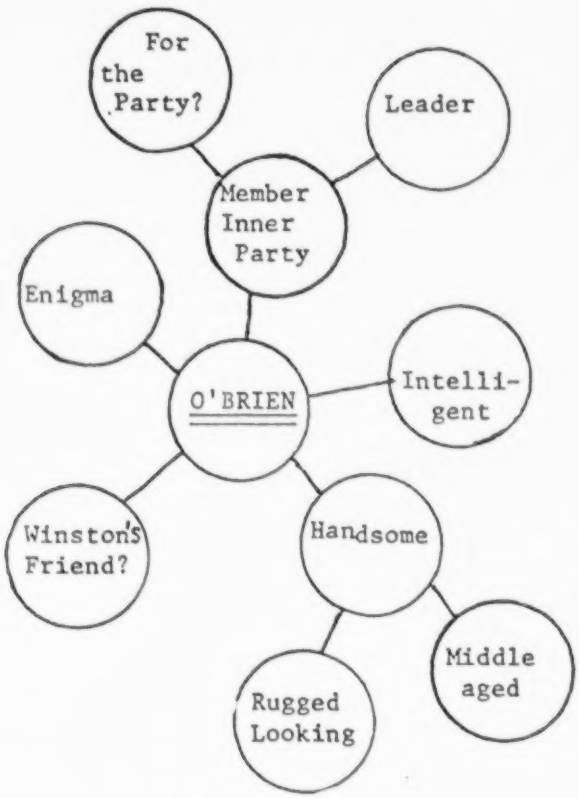
CLASS SESSION - GROUP CLUSTER

ILLUSTRATION II

Character sketch on O'Brien - George Orwell's 1984



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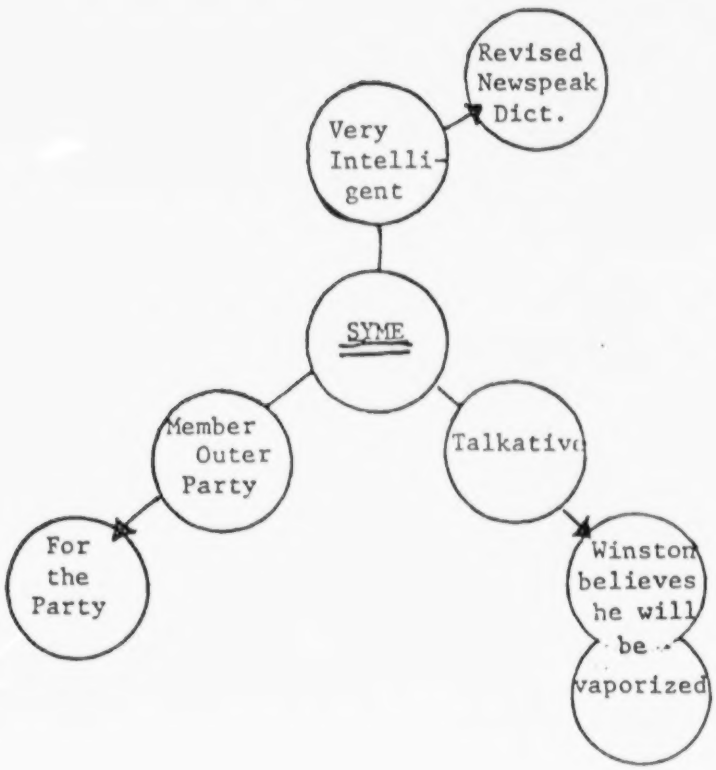
CLASS SESSION - GROUP CLUSTER

ILLUSTRATION III

Character sketch on Syme - George Orwell's 1984



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CLASS SESSION - GROUP CLUSTER

ILLUSTRATION IV

Character sketch on Parsons - George Orwell's 1984

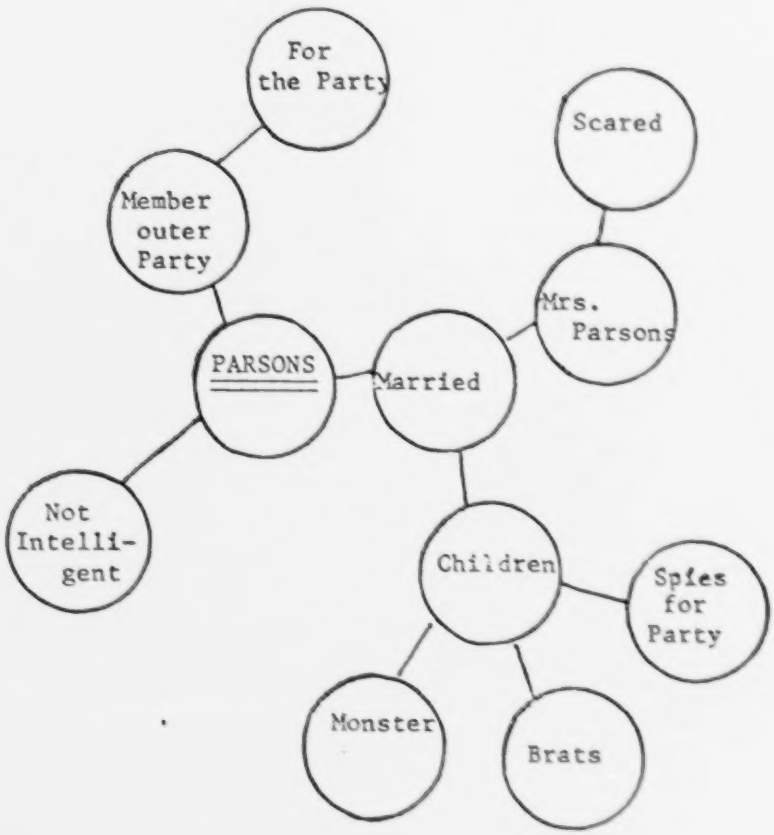

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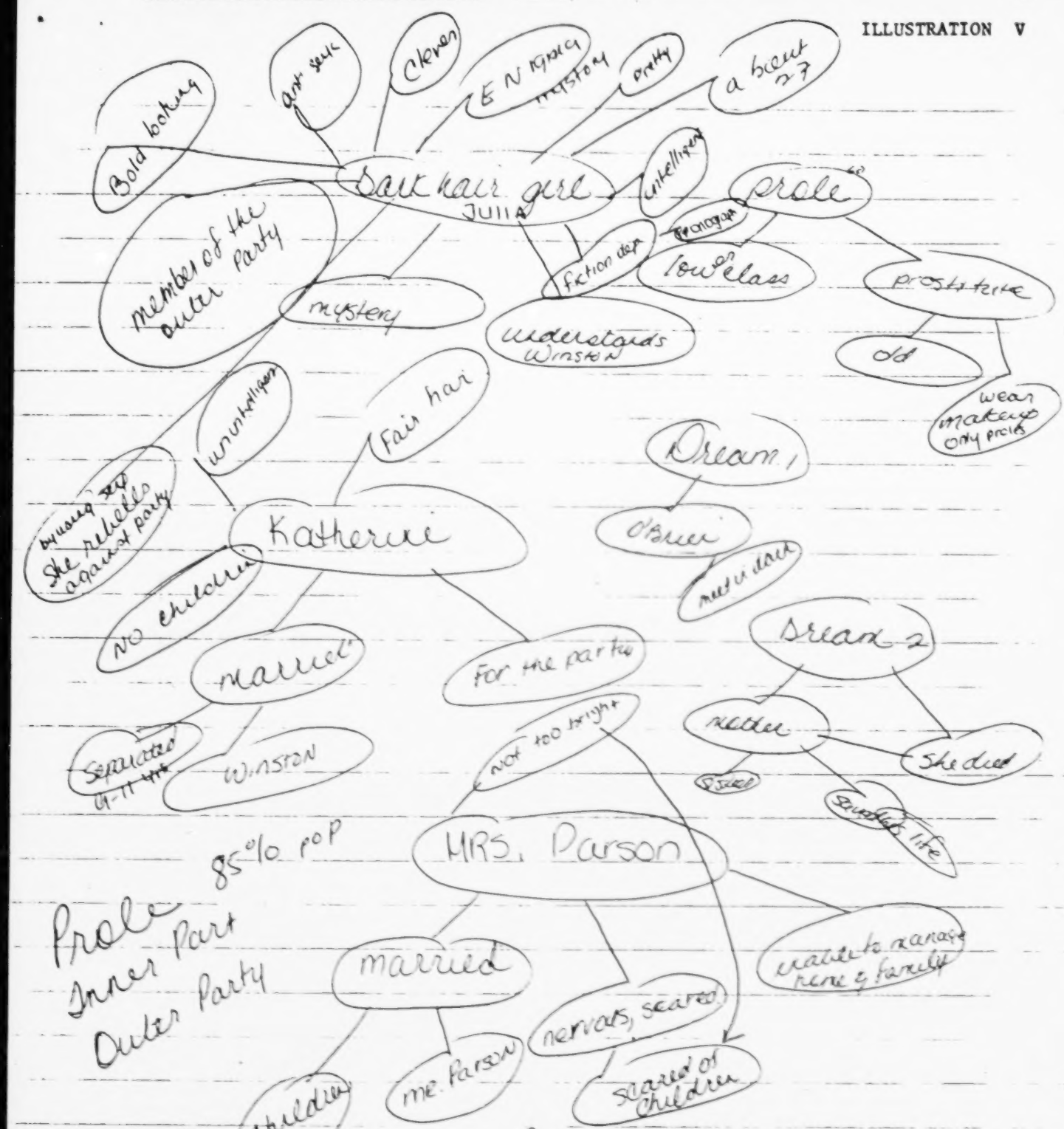
ILLUSTRATION V



All women lack intelligence

Know characters well.

Important to have education in a society.

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If there is any hope they lie with the prols

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